

is the true *I. oniscus*. The main difference in sculpture is that in *I. oniscus* the lateral areas are longitudinally striolate, and the median areas more elevated than in *I. Elizabethensis*; further, the girdle scales in the former species are minutely striated, while in the latter they are smooth. The coloration in *I. oniscus* is very variable; it may be pure white; white stained with brown; lilac with or without brown, yellow, or green markings; green or yellow with blackish dots; indeed the variations are Protean. The girdle coloring is in general co-related to the colors of the shell and is usually marked in a somewhat similar pattern. One specimen measures in length 16 mill. and 7 mill. in breadth. Geographically, *I. oniscus* appears to be confined to Natal, and *I. Elizabethensis* to Cape Colony.

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NOTES ON NEW AND LITTLE-KNOWN AMNICOLIDÆ.

BY HENRY A. PILSBRY.

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*Lyogyrus granum* (Say).

This species has long been known as an *Ammicola*. It was originally described as *Paludina grana* by Thomas Say, from the "fish ponds at Harrowgate," now within the city of Philadelphia. Say did not describe the operculum. Haldeman merely quotes Say's description in his monograph. Binney does the same in L. and Fr.-W. Sh. N. A. III, p. 86, but he gives a figure of a type, which is still preserved in the Philadelphia collection.

Tryon and Gabb both collected specimens within the city limits, and later it has been found in various localities in Pennsylvania and New Jersey. The following lots are now in the collection of the Academy: Philadelphia (Say, Tryon); Fairmount [Park] (Gabb); Macerating tub at A. N. S., fed from city water main (McCadden); Paradise, Lancaster Co., Pa. (Witmer Stone); near Kaighn's Point, N. J. (M. Schick); Paulinskill, Hainesburgh, and Cedar Lake, Warren Co., N. J. (Pilsbry).

Numerous specimens identified by various conchologists as "*A. grana*," from Canada, Ohio, Illinois, Missouri, etc., prove to be other species upon close examination; and so far as present information goes, Say's species extends from Lancaster Co., and Philadelphia, Pa., and Camden, N. J., northward to the ponds and lakes of north-

ern New Jersey. As Say remarks, it is found "crawling on the dead leaves which have fallen to the bottom of the water."

I have learned by the examination of numerous specimens, that the operculum is multispiral, and the species will, therefore, be transferred to the genus *Lyogyrus* of Gill. This character will readily separate the shell from small forms of *Ammicola*.

*Ammicola missouriensis* n. sp.

One of the forms labelled "*Ammicola grana*" in the collection of the Academy proves to be a new and very distinct species, which may be described as follows:

Shell minute, imperforate, obliquely ovate, light brown; surface smooth except for slight growth-lines; composed of  $3\frac{1}{2}$  very convex whorls separated by unusually deep sutures; apex obtuse, often eroded; the last whorl shortly deflexed in front in adult specimens. Aperture rotund-ovate, being slightly narrowed above, but not angular there; not modified in form by the preceding whorl; moderately oblique; peristome continuous, not closely appressed at the upper left side; columellar margin calloused within, thick. Alt. 1.7, diam. 1.3 mm.; length of aperture 0.8 mm.

Carter County, Missouri (John Wolf).

Much smaller than *Bythinella Aldrichi* Call, shorter, with thick and heavy columellar lip.

*Ammicola Walkeri* n. sp.

Shell thin, narrowly umbilicate, conic, shaped like *Lyogyrus Brownii* Carpenter; slightly yellowish corneous; thin, smooth, with faint growth-lines. Whorls 4, very convex, separated by deeply constricting sutures, the last whorl rounded below; apex obtuse. Aperture oblique, rather small, mainly basal, a little longer than wide, but nearly circular, the inner margin a trifle straightened above; peristome continuous, in contact with the preceding whorl for an extremely short distance above. Operculum and dentition Amnicoloid.

Alt. 3, diam. 2; length of aperture  $1\frac{1}{4}$ , width  $1\frac{1}{2}$  mm.

Alt.  $2\frac{1}{4}$ , diam.  $2\frac{1}{2}$ ; length of aperture 1.08, width 1 mm.

Lake Michigan at High Island Harbor, Beaver Is., at 10 meters depth; Reed's Lake, Grand Rapids, Mich.; River Rouge, Wayne Co., Mich.; the types from the first locality mentioned.

This species has been under examination by Mr. Bryant Walker and myself for some months. It was thought at one time to be Say's

*granum*; but besides certain differences in form, this has an Amnicoloid operculum, while in *granum* it is Valvatoid.

The specimens from River Rouge are smaller and more elongated than average shells of the type lot; those from Reed's Lake are fairly typical in form, but perhaps a little thinner.

The name is in honor of Mr. Bryant Walker, to whose acumen the discovery of the form, and of its distinctness from known Michigan Amnicolidæ, is due.

While investigating the characters of the above species, I have had an opportunity, through the courtesy of Prof. W. H. Dall, to examine the types of *Amnicola parva* and *A. orbiculata* Lea, described from Springfield, Ohio.

*A. parva* is like *A. limosa* in the umbilicus and obtuse apex, but is smaller with the whorls particularly tumid just below the suture, producing a somewhat shouldered appearance, such as characterizes *Amnicola cincinnatiensis* (Anth.). The same form occurs at Joliet, Illinois, Muscatine, Iowa, etc. It measures alt. 3·8, diam. 3·2 mm. or somewhat smaller. Whether it is a stunted form of *limosa* due to unfavorable station, or is constantly distinguishable I have not ascertained; but it is at all events quite recognizable. The types show more or less blackish incrustation about the spire, and evidently did not occur with Lea's specimens of *orbiculata*.

*A. orbiculata* is absolutely identical with *A. limosa* var. *porata* Say. The specimens vary between the widely umbilicated *porata* form, and an intermediate form. They are finely grown shells, quite fresh though without opercula, and rather corneous than "yellowish" as Lea says. There was no "mistake" about Lea's "specimen of this species among many small shells which were thrown together in a box, as being collected from our vicinity" (Philadelphia), for *limosa* and *porata* are abundant in both the Delaware and Schuylkill rivers. Two of Lea's type lot measure:

Alt. 5, diam. 4 mm.

Alt. 4, diam. 4 mm.

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#### A NEW SPECIES OF TEREBRA FROM TEXAS.

BY W. H. DALL.

Some years ago the Hon. J. D. Mitchell, of Victoria, Texas, sent to the National Museum a much dilapidated specimen of *Terebra*